

### **REMARKS/ARGUMENTS**

Claims 1-24 are treated in the outstanding Official Action, with claims 16-24 rejected and claims 1-15 withdrawn from consideration. Claims 1-15 have been cancelled without prejudice and claims 17-19 and 21 amended. Therefore, claims 16-24 remain in this application.

The Examiner's acknowledgment of applicants' claim for priority and receipt of the certified copy of the priority document is very much appreciated. Additionally, the Examiner's consideration of the previously submitted prior art in the applicants' Information Disclosure Statement is appreciated.

The Patent Office objects to the Abstract, and the arrangement of the specification. It is also appreciated that the Examiner has brought the Abstract, and the arrangement of the specification to the applicant's attention. It is noted that the objection to the Abstract, and the arrangement appear to be an indication that the originally filed specification and drawings (transmitted from WIPO) do not meet the formality requirements of the U.S. Patent and Trademark Office. The Patent Office is reminded that the U.S. Patent and Trademark Office must comply with all articles of the Patent Cooperation Treaty (PCT) including Article 27. It has been held that:

"if the rule and interpretation of the PTO conflicts with the PCT, it runs afoul of Article 27 of the PCT which provides in part:

- (1) No national law shall require compliance with requirements relating to the form or contents of the international application different from or additional to those which are provided for in this Treaty and the Regulations."  
Caterpillar Tractor v. Commissioner, 231 USPQ 590, 591 (EDVA 1986).

The Patent Office has referenced this decision in the Official Gazette dated September 9, 1986 (1070 TMOG 5).

As a consequence, the Patent Office (including the Chief Draftsman's Office) may not require Abstract changes, specification format changes and/or drawing corrections (including changes in paper size, margins, etc.) as long as the originally submitted documents comply with the PCT requirements. Inasmuch as this specification and these drawings were forwarded for WIPO, by definition, they meet the PCT requirements (they are not forwarded until they meet PCT requirements.). Therefore, the objection to the Abstract, the specification and the Notice of Draftsman's Patent Drawing Review is respectfully traversed and reconsideration thereof is respectfully requested.

Notwithstanding the above, applicant has included a retyped Abstract on a separate sheet, and has added headings and subheadings to the specification. Corrected formal drawings will be submitted upon receipt of a Notice of Allowance.

The Examiner objects to claims 18 and 19 because of informalities. The Examiner's proposed modifications to the language of claims 18 and 19 are approved and entered in the above amendments. Therefore, any further objection to the claims is respectfully traversed.

Claims 17, 19 and 21 stand rejected under 35 USC §112 (second paragraph) as being indefinite. The language identified by the Examiner to be indefinite in claim 17, i.e., the whole of the sacrificial material," has been deleted so as to obviate any needed

antecedent basis. In claim 19, applicants have amended the claim to recite the movable member consistent with the discussion of a movable member in claim 16, from which claim 19 depends. Similarly, in claim 21 the language has been amended to recite the “movable member” consistent with claim 16, from which it depends. Furthermore, applicants have specified the “top contact pad material,” thereby obviating the indefiniteness of the recitation of “the material.” Upon entry of the amendments to these claims, it is believed that the requirements of 35 USC §112 have been met and any further rejection thereunder is respectfully traversed.

Claims 16-21 stand rejected under 35 USC §102 as being anticipated by Welbourn (U.S. Patent 5,262,000). The Court of Appeals for the Federal Circuit has noted in the case of *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 485 (Fed. Cir. 1984) that “[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.”

Applicants’ original claim 16 is a method of producing an ultrasonic transducer including the step of “applying a polymer coating over at least part of the sacrificial material” and then the step of removing at least part of the sacrificial material to leave a portion of the polymer coating defining a movable member.

The Examiner contends that the Welbourn reference teaches “applying a polymer coating (polysilicon layer 7) over part of the sacrificial material.” A person having ordinary skill in the art will clearly understand that a polymer material is not a polysilicon

layer and vice versa. Therefore, the Welbourn patent teaching of creating a polysilicon layer is not a teaching of a polymer coating. Moreover, removing sacrificial material in Welbourn will leave only a polysilicon layer and not a portion of a polymer coating.

Should the Examiner believe otherwise, the Examiner is specifically requested to point out how or why he believes a polysilicon layer to have any resemblance in this particular art to a polymer coating. As is well known, polymers are generally long chain chemical compounds made up of repeating units. Marian Webster's On-line dictionary defines polymer as "a chemical compound or mixture of compounds formed by polymerization and consisting essentially of repeating structural units." Polysilicon is a short-hand name for polycrystalline silicon, i.e., polysilicon is one form of silicon wherein there are a plurality of differently oriented crystal domains.

Polycrystalline silicon has nothing whatsoever to do with a chemical compound or mixture of compounds formed by polymerization, i.e., a polymer. Clarification of how the Examiner defines polysilicon layer and polymer coating (as the term is used in applicants' specification) is respectfully requested. In view of the fact that Welbourn does not teach applicants' claimed invention, any further rejection of claims 16-21 under 35 USC §102 is respectfully traversed.

Claims 16, 19, 22, 23 and 24 stand rejected under 35 USC §103 as unpatentable over Ella (U.S. Patent 5,714,917) in view of Nakanishi (U.S. Patent 4,296,349). The Examiner suggests that the coating material in Ella is "applied in a mobile state by deposition." Applicants' claim specifies that the polymer is applied in a mobile state, and

this is discussed in applicants' specification at page 4, lines 20-26, i.e., the polymer material is applied as a liquid and is then later polymerized after application.

Ella utilizes "sputtering" to evaporate the material which then condenses on the sacrificial material to form the layer of ZnO identified as 52. Evaporative deposition is not "a mobile state" as described and discussed in applicants' specification. Certainly there is no appreciation in Ella that applying a polymer coating in a mobile state and subsequent polymerization as required by applicants' claim 16 provides better bonding than the prior art methods and is not recognized in the Ella patent.

The Examiner admits that Ella fails to teach a "polymer coating layer," but suggests that Nakanishi teaches the use of polymer materials as piezoelectric layers. While Nakanishi does teach piezoelectric layers made of polymer materials, the Examiner has not indicated how or why there would be any motivation for one of ordinary skill in the art to use a polymer material as described in Nakanishi as a substitute for the ZnO layer of Ella.

Moreover, Nakanishi does not disclose applying the polymer coating in a mobile state and instead talks about bonding polymer membranes to his substrate (see column 1, lines 28-30 or column 2, lines 36-38). As a result, Nakanishi would lead one of ordinary skill in the art away from any combination with the Ella reference.

Accordingly, there is no *prima facie* case of unpatentability of claims 16, 19 and 22-24 as being obvious over Ella in combination with Nakanishi. Because the burden is

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Appl. No. 09/743,897  
May 5, 2004

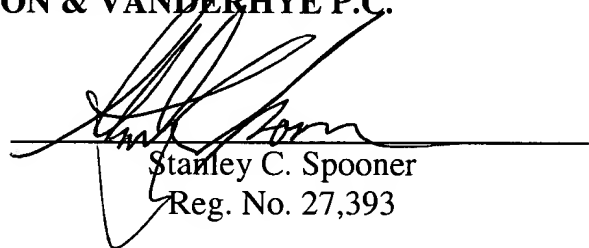
on the Patent Office establish such a *prima facie* case and because there is no support in these references, any further rejection under 35 USC §103 is respectfully traversed.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 16-24 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact applicants' undersigned representative.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

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